



## GAINT CELL TUMOR OF TENDON SHEATH OF DORSUM HAND -A CASE REPORT

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### ABSTRACT

A case of a slow growing painless swelling of the dorsum of the right hand, since 2 yrs. H/O of thorn prick 8 yrs back is reported, to our hospital. The swelling was excised from the surface of the corresponding tendon slip, from the dorsum of the hand. The histopathology report confirmed the diagnosis as giant cell tumor of the extensor tendon sheath.

**KEYWORDS:** Tendon sheath, Giant cell Tumor, Dorsum Hand.

### INTRODUCTION

Soft tissue masses are common in the hand. The differential diagnosis includes benign tumors such as ganglion cysts, tendon sheath tumors, vascular tumors, lipomas, epidermal inclusion cysts, schwannomas, Giant cell tumor and malignant lesions such as sarcomas. Many of these lesions can be diagnosed on physical examination and history. Giant cell tumor is a benign tumor of the soft tissue and of the bone. It typically presents in the distal and proximal end of long bones, but it is quite rare in the hands.<sup>[1]</sup> We present a case of the soft tissue Giant cell tumor of the Dorsum of hand without infiltration of metacarpal bone. Giant cell tumor of the tendon sheath is a slowly progressing benign tumor arising from synovial cells of tendon sheaths. Chas- saignac first described the soft tissue mass in 1852. Hand is more frequently involved than any other part of the body.<sup>[1,2]</sup> In fact it is a rare primary tumor of the hand but is second most common among the soft tissue tumors of the hand.<sup>[3-6]</sup> They occur more commonly on the palmar side of the hand<sup>7</sup>. The age distribution is 8 to 80 years but is more common between 30 to 50 years. Female: male ratio is 3:2. They are usually painless and non-tender. Movements are usually not interfered and rarely erode the bone.<sup>[1,2,6,7]</sup>

## CASE REPORT

A 18 year old male, presented to the department of Orthopedics, Mamata Medical College, Khammam, Telangana, India, with a progressively enlarging painless swelling over the back of his right hand of 2 yr duration. The swelling was arising from dorsum of right hand<sup>[1,2]</sup>, measuring about 10 by 6 cm in dimension. It was , Globular , skin over the swelling stretched, shiny, pinchable , firm in consistency , painless , non tender , well defined margins, can be moved transversly , gradual increasing in size, thorn prick 8yrs back, no h/o trauma. The X-ray of the right hand was normal except for the soft tissue density of the tumour. We narrowed the differential diagnosis to benign soft tissue tumours like ganglion cyst, giant cell tumor of tendon sheath.( Fig 1.).

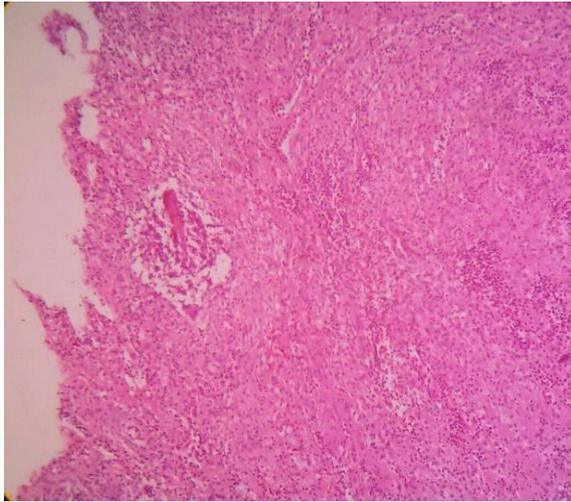
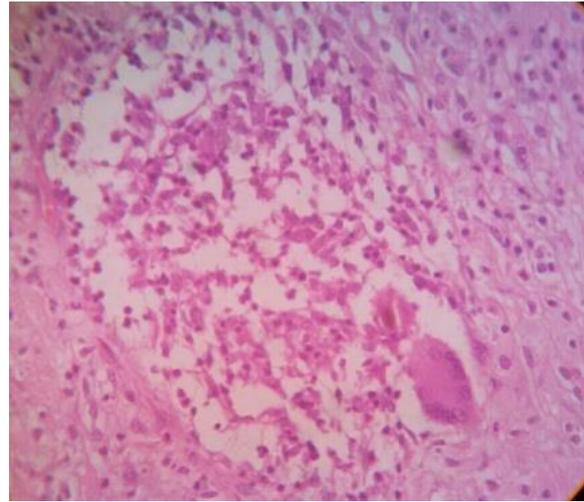


**Fig 1. Tumour on dorsum hand & X-rays**



**Fig 2. Intra-operative tumour excision**

An excision biopsy was done. After exposing the tumour through the dorsal longitudinal incision, it was evident that the soft tissue tumour was more extensive than it appeared clinically. As the tumor had engulfed extensor digitorum communis tendon (EDC) of index finger, it was not sacrificed. It was extending deep into the first intermetacarpal space and adherent to the intrinsic muscles. The tumour was excised in toto. As not reveal any abnormality. The soft tissue tumour was firm, and transaction of the specimen revealed the white, lobulated, chocolate colour and well encapsulated tumour with consistency of scar tissue.(Fig 2).

**Fig4. Microscopic view of tumor****Fig4. Tumor Shows Giant Cells H&Estain**

## DISCUSSION

Giant cell tumor is benign tumor of tendon sheath. It is characterised histologically as a benign tumor with poor cellularity, and the cells contain ovoid or elongated nuclei. Soft tissue Giant cell tumor, occur most commonly in the fourth decade of life. Soft tissue presentations are more common in men, and bony involvement has been reported to have a slight female predilection. These tumours typically present as slow growing, firm, painless nodule in the subcutaneous tissues or bones.<sup>[6]</sup> Soft tissue present primarily in the bones and upper limbs, & lower limbs, in this case it was thorn prick followed by swelling, slow growing, progressive and painless, firm in consistency.

The history of a slowly growing, painless mass that does not involve adjacent structures but is more extensive on surgical exploration is entirely consistent with the growth and behavior of this lesion. In contrast, adherence of tumour to ED tendon, intrinsic muscles, in our case could be related to pressure effect of this long standing lesion. The lack of invasion at the margins, the hypocellularity and the lack of atypia seen during microscopic examination in this case are important histologic features, with distinct tissue planes separating it from adjacent structures. Definitive diagnosis often requires excision biopsy and histopathology examination. During surgery, it presents as a Foreign body granuloma well circumscribed mass with a well-defined pseudo capsule. The tumor appears white and is often lobulated. There is no gross invasion of adjacent structures.

The following differential diagnosis such as Foreign body Granuloma, Fibroma of Tendon sheath, Infection, Ganglion cyst, Rheumatoid nodule was ruled out and confirmed the

diagnosis of Giant cell tumor of Tendon Sheath by Histopathology examination.

## CONCLUSION

Giant cell tumor of the tendon sheath is a rare, benign tumor of hand. Nevertheless, giant cell tumor of the tendon sheath should not be eliminated from the index of suspicion in globular swellings of the hand. The basic aim of management should be early diagnosis with operative excision.

## REFERENCE

1. Walsh EF, Mechrefe A, Akelman E, Schiller AL. Giant cell tumor of tendon sheath. *Am J Orthop*, 2005; 34(3): 116–121.
2. Schultz RJ and Kearns RJ. Tumors in the hand. *J Hand Surg [Am]*. 1983; 8(5 pt 2): 803–806.
3. Karasick D and Karasick S. Giant cell tumor of tendon sheath: spectrum of radiologic findings. *Skeletal Radiol*, 1992; 21(4): 219–224.
4. Rubin BP. Tenosynovial giant cell tumor and pigmented villonodular synovitis: a proposal for unification of these clinically distinct but histologically and genetically identical lesions. *Skeletal Radiol*, 2007; 36(4): 267–268.
5. Ward CM, Lueck NE, Steyers CM. Acute carpal tunnel syndrome caused by diffuse giant cell tumor of tendon sheath: a case report. *Iowa Orthop J*, 2007; 27: 99–103.
6. Booth KC, Campbell GS, Chase DR. Giant cell tumor of tendon sheath with intraosseous invasion: a case report. *J Hand Surg [Am]*. 1995; 20(6): 1000–1002.
7. Smith P. Lister's *The Hand*, 4<sup>th</sup> ed, Edinburgh: Churchill Livingstone; 2001.
8. Hulse N, Watson SJ. Giant cell tumour of tendon sheath in a child: a case report. *Hand Surg*, 2005; 10: 97-100.
9. Lanzinger WD, Bindra R. Giant cell tumor of the tendon sheath. *J Hand Surg Am*, 2013; 38: 154-7.
10. Suresh SS, Zaki H. Giant cell tumor of tendon sheath: case series and review of literature. *J Hand Microsurg*, 2010; 2: 67-71.
11. Al-Qattan MM. Giant cell tumours of tendon sheath: classification and recurrence rate. *J Hand Surg Br*, 2001; 26: 72-5.
12. Adams EL, Yoder EM, Kasdan ML. Giant cell tumor of the tendon sheath: experience with 65 cases. *Eplasty*, 2012; 12: e50.